

**DRAWINGS:**

A replacement sheet is included to correct the inadvertent misspelling of the word  
"mixer" in FIG. 1.

**REMARKS**

The Office Action mailed July 13, 2005 has been reviewed and carefully considered. Claims 3, 7 and 8 are redrafted into independent form without any other revision. Claims 1 and 2 are canceled, and the dependencies of claims 5 and 11 have accordingly been updated. Claims 12-15 are added. Claims 3-9 and 11-15 are pending, the independent claims being 3, 7, 8 and 12. Claims 4-6, 9 and 11 are amended. Reconsideration of the above-identified application, as amended and in view of the following remarks, is respectfully requested.

In compliance with 37 CFR 1.121(d), a replacement sheet is included to correct the inadvertent misspelling of the word "mixer" in FIG. 1.

Claim 6 stands rejected under 35 U.S.C. 112, second paragraph, for indefinite language. The amendment of claim 6 is believed to overcome this ground of rejection.

The Office action objects to the specification for lacking headings. Applicant(s) respectfully traverse(s) this objection. Subject headings are not statutorily required for filing a non-provisional patent application under 35 USC 111(a), but per 37 CFR 1.51(d) are only guidelines that are suggested for applicant's use. Furthermore, the Office has stated that it will not require conformance with the format set forth in 37 CFR 1.77. (See Miscellaneous Changes in Patent Practice, Response to comments 17 and 18 (Official Gazette, August 13, 1996) [Docket No: 950620162-6014-02] RIN 0651-AA75 ("Section 1.77 is permissive rather than mandatory. ... [T]he Office will not require any application to comply with the format set forth in 1.77"). Accordingly, withdrawal of this objection to the specification is also respectfully requested.

Claims 1, 2, 10 and 11 stand rejected under 35 U.S.C. 102(e) as anticipated by U.S. Patent Publication No. 2002/0141511 to Vishakhadatta et al. ("Vishakhadatta").

Claim 11 is amended to depend from claim 3, and the other claims are canceled. Accordingly, this ground of argument is believed to be moot.

Claim 3 stands rejected under 35 U.S.C. 103(a) as unpatentable over Vishakhadatta in view of U.S. Patent No. 6,816,718 to Yan et al. ("Yan").

As the Office Action acknowledges, Vishakhadatta fails to disclose or suggest differential implementation of the quadrature paths.

Although the Office Action provides Yan to make up the difference, Yan is not prior art applicable to the claims of the present patent application.

Yan has a filing date of February 7, 2002.

By contrast, and as seen from the filing receipt and the Office Action Summary dated November 30, 2004, the effective filing date of the instant patent application is January 24, 2001. Since the latter date precedes the filing date of Yan, Yan does not qualify as prior art against the instant claims.

For at least the above reason(s), the combination of references the Office Action cites fails to render obvious the present invention as recited in claim 3, which is now redrafted into independent form. Reconsideration and withdrawal of the rejection is respectfully requested.

Claim 4 stands rejected under 35 U.S.C. 103(a) as unpatentable over Vishakhadatta in view of Yan and U.S. Patent No. 5,546,048 to Sano et al. ("Sano").

Claim 4 depends from claim 3. As discussed above with respect to claim 3, Yan cannot make up for the shortcomings of the primary reference. Nor can Sano, at

least because Sano fails to disclose or suggest quadrature paths being implemented differentially. Reconsideration and withdrawal of the rejection is respectfully requested.

Claims 5-7 stand rejected under 35 U.S.C. 103(a) as unpatentable over Vishakhadatta in view of U.S. Patent No. 6,509,799 to Franca-Neto.

Claim 7, now redrafted into independent form, recites, ". . . across the cascode arrangement of semiconductors (15) there is connected a capacitor (C)."

Although Franca-Neto discloses a cascade arrangement of transistors 20, 22 in FIG. 2 (col. 4, lines 21-23), the reference fails to disclose or suggest a capacitor "across" the arrangement.

The Office Action suggests that capacitor 52 is across the arrangement, but FIG. 2 shows the capacitor to be in series with the arrangement.

For at least this reason, the combination the Office Action proposes fails to render obvious the present invention as recited in claim 7. Reconsideration and withdrawal of the rejection is respectfully requested.

Claims 5 and 6, as amended, depend from claim 3, and Franca-Neto cannot make up for the deficiencies in the primary reference. For at least this reason, claims 5 and 6 distinguish patentably over the cited references.

Claim 8 stands rejected under 35 U.S.C. 103(a) as unpatentable over Vishakhadatta in view of U.S. Patent No. 6,904,538 to Glas et al. ("Glas").

Claim 8 is now redrafted into independent form.

As the Office Action acknowledges, the primary reference fails to disclose or suggest the language particular to claim 8.

The Office Action suggests that Glas makes up for the difference.

Glas, however, has an effective filing date of November 20, 2001, which is predated by the effective filing date of the instant patent application, as mentioned above. Accordingly, the instant ground of rejection is regarded to be without merit. Reconsideration and withdrawal of the rejection is respectfully requested.

Claim 9 stands rejected under 35 U.S.C. 103(a) as unpatentable over Vishakhadatta in view of U.S. Patent No. 2,730,699 to Gratian.

Notably, the dependency of claim 9 has been corrected to provide antecedent basis in the claims. Accordingly claim 9 depends from claim 8, and Gratian cannot make up for the shortcomings of the primary reference. For at least this reason, claim 9 distinguishes patentably over the cited references.

New method claims 12-15 correspond to apparatus claims 3-6, respectively.

A check for \$200.00 is enclosed in payment of the fee for adding an independent claim in excess of three.

For all the foregoing reasons, it is respectfully submitted that all the present claims are patentable in view of the cited references. A Notice of Allowance is respectfully requested.

Respectfully submitted,

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